

The Impact of Less Traditional Employee Benefits on the Turnover Intention of State Information Systems Employees

Full paper

Ibtissam Zaza
Florida State University
iz13@my.fsu.edu

Deborah J. Armstrong
Florida State University
djarmstrong@business.fsu.edu

Cynthia K. Riemenschneider
Baylor University
c_riemenschneider@baylor.edu

Abstract

This study explores the influence of less traditional employee benefits (e.g., familial and participant benefits) on state IS employees perceptions of their workload, work exhaustion and turnover intention. The employee benefits explored did not directly influence work exhaustion and turnover intention but significant interaction effects were detected. Employee benefits negatively moderated the relationship between perceived workload and work exhaustion and between work exhaustion and turnover intention for state IS employees. This research begins the discussion regarding the influence of different benefit programs on key workforce constructs of interest to organizations.

Keywords

Job benefits, turnover intention, work exhaustion, workload.

Introduction

The turnover rate for IS professionals has been and continues to be an issue within the field (Ford et al. 2013). Employee benefits fall under human resource management (HRM) practices and are a form of non-wage compensation offered to employees in addition to salary. The most common employee benefits are insurance, retirement, and paid time off (i.e., leave). Employee benefits are provided to workers to increase their economic security, and in exchange, improve worker retention (Gullekson et al. 2014).

A social exchange is an interaction that generates obligations, and within a work context, social exchange theory can be conceptualized as an exchange between an employer and employee in which each party must provide something that is perceived as valuable (Cropanzano and Mitchell 2005). For example, when an organization offers employee benefits, it provides something that is perceived as valuable, and sends a signal to the employee that he/she is valued by the organization. In exchange for the benefits, the employee provides his/her continued labor which is perceived as valuable by the organization.

While employee benefits have been found to have a positive effect on retention, the dilemma facing organizations is the cost of implementing employee benefit programs versus potentially exposing employees to work exhaustion and ultimately turnover (Dreher et al. 1988). The Bureau of Labor Statistics reported that as of 2014, employers spent an average of 31.6 percent of employee compensation costs on benefits. One way to help manage these costs might be to more finely target the benefits provided to employees. Do all employees view benefits the same? Would a single male appreciate childcare assistance or a bonus plan more? While employee benefits have been classified in a number of ways, one of the most consistent categorizations was provided by Knoke (1994) who found three overarching

dimensions of benefits: personal (e.g., insurance¹), familial (e.g., flexible work schedule) and participant (e.g., pay for performance). Kim (2005) found that for State IT employees' satisfaction with pay and the personal benefits they received decreased turnover intention.

In this research, we will examine the effect of less traditional² (i.e., familial and participant; Kim 2005) employee benefits on the perceived workload (PWL), work exhaustion (WE) and turnover intention (TOI) of IS professionals. In addition, we explore whether these less traditional employee benefits (LTEB) moderate the relationship between PWL and WE, and between WE and TOI. The paper is organized as follows. We begin by briefly presenting previous work related to PWL, WE, TOI, and LTEB. Then, we discuss how LTEB may influence WE and TOI directly and indirectly. The methodology and results of the data analysis are presented along with a discussion of the implications for research and practice.

Literature Review and Hypothesis Development

As organizations are asking more from their IS professionals (e.g., increased workload), WE and TOI are increasing (e.g., Armstrong et al. 2015), one way to reduce the effects and retain these valued professionals may be through employee benefits. For example, scholars have found a negative link between employee benefits (e.g., child care policies, work-life programs, telecommuting, alternative schedules) and TOI within the public sector (e.g., Kim and Wiggins 2011). In contrast, in the private sector Thompson and Prottas (2006) and Batt and Valcour (2003) found that familial benefit programs were only partially associated with a decrease in TOI. Thus the state IS environment provides a perfect context to explore the influence of LTEB on WE and TOI.

We begin with the well-established turnover intention model in which PWL (job demands perceived to exceed individual's ability to meet those demands; Kirmeyer and Dougherty 1988) positively influences WE (feeling of being overextended; Maslach et al. 2001), which in turn positively influences TOI. A significant amount of research has explored the PWL-WE-TOI relationships (e.g., Ahuja et al. 2007; Armstrong et al. 2015; Joseph et al. 2007; Moore 2000). Within the context of the public sector, studies have found a relationship between WE and TOI (e.g., Jackson et al. 1987; Kim 2005; Thatcher et al. 2002). As these relationships have been established in the literature, we use this model as our foundation.

Boundary spanning is defined as an "individual's crossing of intradepartmental and interorganizational boundaries in order to perform his/her job" (Baroudi 1985, p. 342). Researchers have established that boundary spanning activities (BSA) are a major component of information systems (IS) professionals' job tasks (e.g., Baroudi 1985; Igarria et al. 1994; Vaast and Levina 2006). In a recent study, Zaza et al. (2015) found that while BSA did not influence workload perceptions WE mediated the effect of BSA on TOI. Thus we include the influence of BSA within the current study to contextualize it to the IS field but do not provide hypotheses for these previously found relationships.

One avenue for aligning employees' attitudes with organizational goals is through organizational support offered to employees via HRM practices that recognize the importance of human capital (Allen et al. 2003). Organizations (private and public) tend to implement a diverse mixture of HRM practices including traditional (i.e., personal benefits) and non-traditional (familial and participant). Even though public organizations are often faced with financial difficulties leading to pay cuts for state employees and often the downsizing of their benefits, public organizations strive to provide traditional benefits such as health insurance and retirement plans as well as family-friendly benefits such as flexible work schedules and telecommuting (Newman and Mathews 1999). Although the general management literature has explored the direct relationship between employee benefits and TOI (e.g., Kim and Wiggins 2011; Lee and Hong 2011) not much is known about whether state IS employees' benefits impact their work attitudes. To parallel previous research and confirm this relationship in our context we hypothesize

H1: *Less traditional employee benefits will negatively influence turnover intention among state IS employees.*

¹ All states provide health insurance coverage for their employees. <http://www.ncsl.org/research/health/state-employee-health-benefits-ncsl.aspx>

² These are optional benefits that are not standardized at the state level.

One of the aspects of engaging in BSA is the potential for role conflict (when performing one work role interferes with performing another; Moore 2000) to occur. According to role theorists, role conflict exacerbates WE, but can be managed through resources offered by the organization (e.g., Allen 2001; Barnett and Garies 2006). State IS employees may take advantage of LTEB to reduce their WE. For example, an individual may be less exhausted knowing that the hard work that he has put in will be monetarily rewarded (e.g., pay for performance); or by telecommuting two days a week an individual can provide care for his aging parent (e.g., flexible work schedule). Hence, we hypothesize

H2: *Less traditional employee benefits will negatively influence work exhaustion among state IS employees.*

Not only may LTEB alleviate WE and TOI, we propose that LTEB will moderate the PWL-WE and WE-TOI relationships. For example, Telecommuting can provide relief from stress arising out of the commute to work (Raghuram and Wiesenfeld 2004). In our context, if a state IS employee is offered the option to telecommute it may provide the individual a buffer, such that the lack of commute and/or work environment may diminish the effect of PWL on his or her WE. In addition, research has explored various reward structures as a means to mitigate the adverse effects of role stressors (e.g., the effect of perceived workload on exhaustion), and monetary rewards have been found to be an effective coping resource (Brotheridge and Lee 2002). So while his or her workload remains high (consistent), LTEB options may lessen the feelings of exhaustion brought on by the PWL. Hence, we hypothesize

H3: *Less traditional employee benefits will have a negative moderating effect on the relationship between perceived workload and work exhaustion among state IS employees.*

In a similar vein, we propose that LTEB will moderate the WE-TOI relationship. In one of the few papers found that explore the variables under study here, perceived organizational rewards and exhaustion were correlated with nurses' turnover intention through affective commitment (Takase et al. 2015). Applied to our context, if a state IS employee is offered the option to telecommute, even though he or she might experience feelings of WE, getting the work done in the comfort of his or her house or other location may buffer the individual from the effects of WE on his/her intention to turnover. So while WE remains high, the telecommuting option may lessen the feelings of wanting to leave the organization. Offering other types of LTEB such as formally recognizing employees' performance may influence IS employees to remain with the state agency. Even if they are experiencing WE, recognizing their work in front of their department/coworkers and acknowledging that their efforts are appreciated may help buffer the feelings of exhaustion such that they do not increase workers' intention to leave. Hence we hypothesize

H4: *Less traditional employee benefits will have a negative moderating effect on the relationship between work exhaustion and turnover intention among state IS employees.*

Figure 1 presents the research model and the four hypotheses.

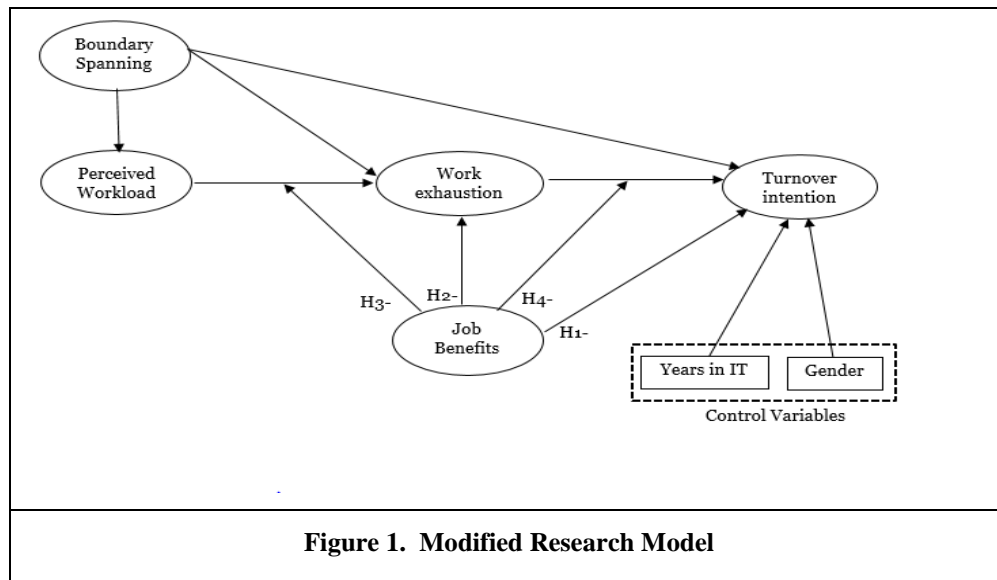


Figure 1. Modified Research Model

Method

In building our model we draw on the perceptions of IS employees working in state IS departments regarding the relationships between boundary spanning, LTEB and work-related outcomes that are applicable in their state government agencies.

Participants

Our sample consisted of 417 IS employees representing 21 states (42% response rate), of which 36% were male, 51% were female, and 13% did not report their gender. The participants were well educated with 54% having a bachelor's degree or higher and 44% having a degree in an IS-related major. The participants had a mean age of 46.33 years ($SD = 9.52$), job tenure of 8.30 years ($SD=6.93$), organizational tenure of 11.19 years ($SD= 8.77$), and tenure in the IS field of 16.62 years ($SD=9.94$). The Executive Director of the National Association of State Chief Information Officers (NASCIO) contacted the state CIOs by e-mail, giving them the URL for the survey website, and asking him/her to distribute the survey URL to his/her IS employees.

Measures

All survey items (shown in the Appendix) were adopted from previously validated scales with the exception of LTEB, and were adapted to our context. Employee benefits was measured with a 5-item scale developed from multiple sources (Ko and Hur 2014; Luthans 2000) which captured two less traditional benefit categories – familial benefits and participant benefits. Responses were recorded using a 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree). Two demographic variables, gender and tenure in the IS field, were included as control variables. In addition, the IS literature suggests to control for industry. As all participants in this study were state IS employees, there was a natural control for industry. A common method variance analysis was conducted using Harmon's one factor analysis (Podsakoff et al. 2003). We ran an exploratory factor analysis (EFA) for all of items making no rotation, and no single factor explained the majority of the variance shared among the items. This indicated that common method variance does not significantly affect our results.

Results

Measurement Model

The data was analyzed using SmartPLS Version 3.1.9 (Ringle et al. 2014) following the guidelines outlined by Chin (1998). We could have used other SEM approaches (e.g., LISREL) but we utilized component-based SEM (PLS) because we conceptualized LTEB as a formative construct to which PLS is particularly suited (Henseler et al. 2009). Based on the guidelines to identify a construct as formative or reflective recommended by Petter et al. (2007), we modeled LTEB as a formative construct because "... dropping an indicator may alter the conceptual domain of the construct and ... indicators are not required to have the same antecedents and consequences". We adopted the two-step approach when dealing with SEM (Anderson and Gerbing 1988). In step 1 we assessed the reliability and validity of the reflective constructs using composite reliability (CR), Cronbach's alpha (CA) and average variance extracted (AVE). Each construct has a CA and CR greater than .7 (Fornell and Larcker 1981), as well as an AVE greater than .5 as recommended by Chin (1998). For the formative construct LTEB, CR and CA are not assessed, because formative indicators are not necessarily internally consistent (Bollen 1984; Chin 1998). In step 2 convergent and discriminant validity were assessed by confirmatory factor analysis (CFA) for the reflective constructs. Convergent validity was assessed by high factor loadings on respective constructs, CR, AVE, and CA. Factor analysis was conducted and items that cross-loaded highly on multiple factors were removed (PWL3, PWL4, TOI1, TOI3)³. We repeated the procedure and all factor loadings were greater than .70 with no problematic cross-loadings (Hair et al. 2006), indicating appropriate convergence of the items to their factors. Discriminant validity was assessed by examining the indicator loadings (loading higher on the intended constructs than on the other constructs), by comparing the

³ PWL3 and PWL4 were deleted because they are frequency measures and they did not fit the established scale.

square root of the AVE to the correlations. Table 1 shows the AVE, CA, and CR for each of the constructs along with the correlations with the square root of the AVE on the diagonal. The square root of the AVE is larger for each construct than any of the corresponding factor correlations, illustrating discriminant validity of the constructs. From Table 1, the highest correlation was between PWL and WE (0.72). Both constructs passed the construct validity measures as recommended by Fornell and Larcker (1981) and their respective AVEs were 0.94 and 0.91.

Item weights rather than item loadings were used as evidence of construct validity for the formative construct - LTEB (Diamantopoulos and Winklhofer 2001; Petter et al. 2007). Convergent validity is not required for evaluating the psychometric adequacy of formative constructs (Jarvis et al. 2003). Multicollinearity is an undesirable property in formative models as it causes estimation difficulties multicollinearity (Petter et al. 2007). For formative measures, scholars suggest that VIF values greater than 3.3 indicate high multicollinearity (Diamantopoulos and Siguaw 2006, Petter et al. 2007). Table 2 presents the correlation among the indicators for the construct, the item weights, and corresponding VIF. As seen in Table 2, BEN4 has a VIF > 3.3 and was deleted.

	Mean	Standard Dev.	AVE	CR	CA	PWL	BSA	BEN	WE	TOI
PWL	3.38	1.74	0.89	0.94	0.88	0.94				
BSA	3.55	1.46	0.70	0.87	0.79	0.05	0.83			
BEN	2.73	1.51	NA	NA	NA	.14**	0.23**	NA		
WE	3.65	1.76	0.83	0.96	0.95	0.72**	-0.10*	0.01	0.91	
TOI	3.14	1.93	0.94	0.97	0.94	0.45**	-0.17**	-0.03	0.59**	0.97
** Correlation is significant at the .01 level (2-tailed)										
* Correlation is significant at the .05 level (2-tailed)										
Note: The diagonals are the square roots of the average variance extracted (AVE) for each factor.										

Table 1. Descriptive Statistics and Correlations among Latent Constructs

	Item Weight	BEN1	BEN2	BEN3	BEN4	BEN5	VIF
BEN1	0.562	1	.582**	.458**	.407**	.407**	1.822
BEN2	-0.103	.582**	1	.454**	.483**	.481**	1.812
BEN3	0.682	.458**	.454**	1	.637**	.510**	2.077
BEN4	0.361	.407**	.483**	.637**	1	.791**	3.346
BEN5	0.562	.407**	.481**	.510**	.791**	1	3.027
** Correlation is significant at the 0.01 level (2-tailed).							

Table 2. Correlations among LTEB indicators, item weights, and VIF

Based on the evidence, we accepted our measurement model, and we moved to test the structural model.

Structural Model

Each of the constructs in the structural model was analyzed as a reflective construct except LTEB. In order to test the structural model, the standard bootstrap resampling procedure (using 1,000 samples) in SmartPLS was used to determine which paths were significant. The PLS results are shown in Figure 2. The R-square value for WE was found to be 0.559, and 0.402 for TOI. The control variables gender ($\beta = 0.042$, $p > 0.05$) and tenure in the IS field ($\beta = -0.081$, $p > 0.095$) were found to be non-significant. The results indicated that LTEB (BEN) of state IS employees does not directly influence WE and TOI ($\beta = -0.045$, $p > .05$; $\beta = -0.094$, $p > .05$; respectively), hence H1 and H2 were not supported. As for the interaction, a significant negative effect was found for both the PWL-WE and WE-TOI relationships ($\beta = -0.038$, p

$< .0001$; $\beta = -0.040$, $p < .0001$; respectively) supporting H3 and H4. Hence, at low levels of PWL, LTEB does not affect WE, but at high levels of PWL, LTEB helps reduce the effect on exhaustion. Also, at low levels of WE, providing LTEB increases TOI, but at high levels of WE, LTEB reduces the effect on TOI.

Post Hoc Analysis

Previous literature found that gender has a significant impact on turnover intention within the IS field both directly (e.g., Igbaria and Baroudi 1995) and indirectly (e.g., Gallivan 2004). In addition, studies within the management literature have found that females are inclined to endorse family-friendly employee benefits more than men (Baxter 2000). Given the juxtaposition of the non-significant relationship between gender and turnover intention in our data and the evidence in the literature, we decided to conduct a post hoc analysis to further explore any gender differences in this study with regard to the influence of less traditional employee benefits. We split the sample by gender and re-ran the analysis. Surprisingly, there was no interaction effect for LTEB and the PWL-WE or WE-TOI relationships for both females and males. Instead, a significant direct effect on WE was found for both female and male state IS employees while a significant direct effect on TOI was found only for female state IS employees. To confirm sample size suitability, we ran a power analysis of the male benefit-TOI relation (.98) thus asserting that the sample size was sufficient.

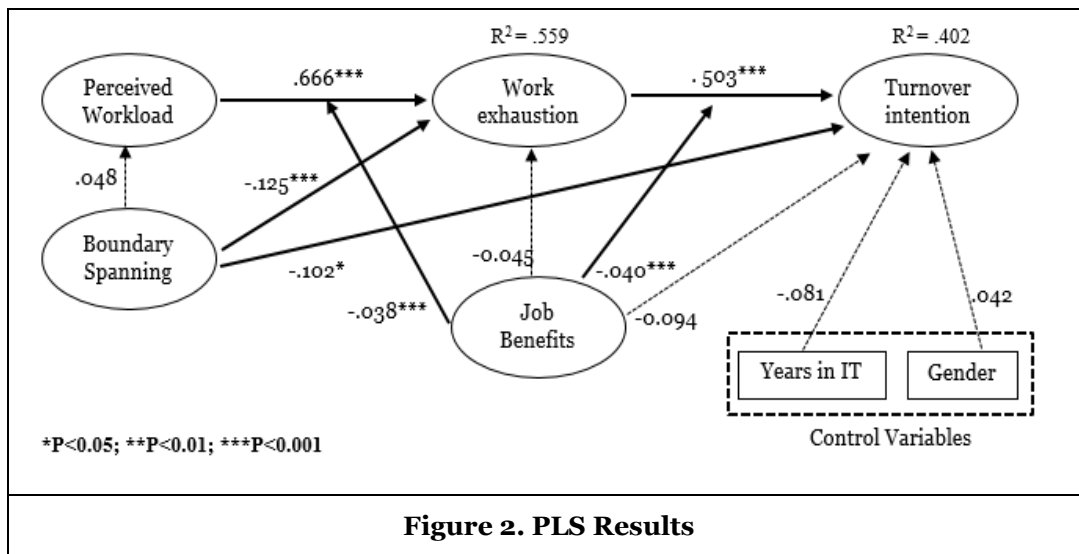


Figure 2. PLS Results

Discussion

The purpose of this research is to contribute to the growing body of knowledge on WE and TOI and explore the influence of LTEB on these phenomena. Our model had reasonable explanatory power accounting for just over half of the variance in WE (56%) and 40% of the variance in TOI with a small but significant contribution beyond the well-established antecedents. LTEB weakened the PWL - WE relationship and the WE - TOI relationship even though LTEB did not directly influence WE and TOI. Based on social exchange theory, we see that LTEB are valued by and aid IS employees by perhaps buffering the negative effects of PWL and WE. This would suggest that simply adopting a number of employee benefits is not sufficient to reap the greatest rewards for the organization and its employees. Instead, a focused effort should be undertaken to craft a workplace culture accepting of LTEB, and perhaps customizable employee benefit programs. Future research might explore under what circumstances these and other types of benefits (e.g., elder care programs) have the most impact.

In the case of female state IS employees, the benefits included in this study have a direct influence on their WE and TOI. This may occur because these policies are “a necessary first step to improve the goodness of fit between the lives of women and the workplace experience” (Newman and Mathews 1999,

35). Hence, these benefits may buffer the effect of boundary spanning for the females reflecting the importance of these benefits to them perhaps as a way to help balance their work and home roles. The same cannot be concluded for the male state IS employees. Even though LTEB lowered the levels of WE for male state IS employees, BSA outweighs LTEB in its influence on TOI. For female state IS employees, benefits suppress their WE and TOI, but, benefits only influence WE for male state IS employees. This finding suggests that perhaps state IS departments need to customize LTEB to find those that would be most helpful for their specific employees. Future research may explore other benefits that may be of particular interest to state IS employees.

One contribution to theory is the proposal of an expanded nomological network for the exploration of TOI of IS personnel. Admittedly, future work is needed to confirm (or refute) the findings of this study both within the public sector and other contexts. In addition, future research may study other employee benefit programs and combinations of benefits that provide the best outcomes. From a practical standpoint, our findings emphasize the inappropriate nature of 'one size fits all' interventions. There are many roads to turnover, and understanding the different perspectives of IS personnel is key to potentially increasing the retention of high-value employees. Thus it is important to identify not only the variables that are associated with WE and TOI, but particularly those the organization is able to impact. This study identifies LTEB as one of those variables. In the public sector, human resource managers should be aware of the phenomenon that they are facing because different remedies could apply.

Limitations

In considering our results, some limitations of our study should be kept in mind. First, although we investigated a structural model of relationships among variables, our research design was cross-sectional. We can only conclude that our model is a possible explanation of the observed relationships in the data. The direction of paths in our model rely on prior empirical results and theoretical arguments. Second, although we investigated our theoretical model using a large sample, the generalizability of our findings beyond the context of state IS employees relies on additional research. Third, our mean sample age was somehow high for TOI. A final limitation is with regard to the items used in the study to assess the relationships between the constructs. Specifically, the items refer to the perceptions of the respondents, and not the actual occurrence of the characteristics described by the constructs. Future research should explore the extent that the measures in this study and objective measures of the constructs align to confirm or refute the findings of this study.

Conclusion

This study has explored the influence of less traditional employee benefits on state IS employees' perceptions of their workload, work exhaustion and turnover intention. Less traditional employee benefits did not directly influence work exhaustion and turnover intention but significant interaction effects were detected between perceived workload and work exhaustion, and between work exhaustion and turnover intention. These findings may pave the way for future researchers to explore the influence of other less traditional employee benefits on work exhaustion and turnover intention. Also, future research may convert LTEB to a reflective form, changing its measurement items into respondent's assessments based on their perceptions.

REFERENCES

- Ahuja, M. K., Chudoba, K. M., Kacmar, C. J., McKnight, H., and George, J. F. 2007. "IT Road Warriors: Balancing Work-Family Conflict, Job Autonomy and Work Overload to Mitigate Turnover Intentions," *MIS Quarterly* (31:1), pp. 1-17.
- Allen, T. D. 2001. "Family-Supportive Work Environments: The Role of Organizational Perceptions," *Journal of Vocational Behavior* (58), pp. 414-435.
- Allen, D., Shore, L., and Griffeth, R. 2003. "The Role of Perceived Organizational Support and Supportive Human Resource Practices in the Turnover Process," *Journal of Management* (29), pp. 99-118.
- Anderson, J., and Gerbing, D. 1988. "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin* (1:3), pp. 411-423.

- Armstrong, D. J., Brooks, N. G., and Riemenschneider, C. K. 2015. "Exhaustion from Information System Career Experience: Implications for Turn-Away Intention," *MIS Quarterly* (39:3), pp. 713-727.
- Barnett, R. C., and Gareis, K. C. 2006. "Role Theory Perspectives on Work and Family," in *M. Pitt-Catsoupes*, E. E. Kossek and S. Sweet (eds.), Mahwah, NJ: Erlbaum. pp. 209-221.
- Baroudi, J. 1985. "The Impact of Role Variables on IS Personnel Work Attitudes and Intentions," *MIS Quarterly* (9:4), pp. 341.
- Batt, R., and Valcour, P. M. 2003. "Human Resources Practices as Predictors of Work-Family Outcomes and Employee Turnover," *Industrial Relations* (42), pp. 189-220.
- Baxter, J. 2000. "Barriers to Equality: Men's and Women's Attitude to Workplace Entitlements in Australia," *Journal of Sociology* (36:1), pp. 12-29.
- Bollen, K. 1984. "Multiple Indicators: Internal Consistency of No Necessary Relationships?" *Quality and Quantity* (18), pp. 377-385.
- Brotheridge, C. M., and Lee, R. T. 2002. "Testing a Conservation of Resources Model of the Dynamics of Emotional Labor," *Journal of Occupational Health Psychology* (7:1), pp. 57-67.
- Chin, W.W. 1998. "The Partial Least Squares Approach for Structural Equation Modeling," in *Modern Methods for Business Research*, G.A. Marcoulides (ed.), Mahwah, NJ: Lawrence Erlbaum Associates, pp. 295-336.
- Cropanzano, R., and Mitchell, M. 2005. "Social Exchange Theory: An Interdisciplinary Review," *Journal of Management* (31:6), pp. 874
- Diamantopoulos, A., and Siguaw, J.A. 2006. "Formative Versus Reflective Indicators in Organizational Measure Development: A Comparison and Empirical Illustration," *British Journal of Management* (17), pp. 263-282.
- Diamantopoulos, A., and Winklhofer, H. M. 2001. "Index Construction with Formation Indicators: An Alternative to Scale Development," *Journal of Marketing Research* (38), pp. 259-277.
- Dreher, G., Ash, R. and Bretz, R. 1988. "Benefit coverage and employee costs: critical factors in explaining compensation satisfaction," *Personnel Psychology* (41:2), pp. 237-54.
- Ford, V. F., Swayze, S., and Burley, D. L. 2013. "An Exploratory Investigation of the Relationship between Disengagement, Exhaustion and Turnover Intention among IT Professionals Employed at a University," *Information Resources Management Journal* (26:3), pp. 55-68.
- Fornell C., and Larcker, D. F. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* (18:1), pp. 39-50.
- Gallivan, M. J. 2004. "Examining IT Professionals' Adaptation to Technological Change: The Influence of Gender and Personal Attributes," *The DATA BASE for Advances in Information Systems* (35:3), pp. 28-49.
- Gulleson, L. N., Griffeth, R. B., Vancouver, J. T., Kovner, C. and Cohen, D. 2014. "Vouching for Childcare Assistance with Two Quasi-Experimental Studies," *Journal of Managerial Psychology* (29:8), pp. 1008-994.
- Hair, J., Black W., Babin B., Anderson R., and Tatham R. 2006. *Multivariate Data Analysis*, Upper Saddle River, NJ: Prentice Hall.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. 2009. "The Use of Partial Least Squares Path Modeling in International Marketing," *Advances in International Marketing* (20), pp. 277-320.
- Igbaria, M., and Baroudi, J. 1995. "The Impact of Job Performance Evaluations on Career Advancement Prospects: An Examination of Gender Differences in the IS Workplace," *MIS Quarterly* (19:1), pp. 107-123.
- Igbaria, M., and Chidambaram, L. 1997. "The Impact of Gender on Career Success of Information Systems Professionals: A Human Capital Perspective," *Information Technology & People* (10:1), pp. 63-86.
- Igbaria, M., Parasuraman, S., and Badawy, M. 1994. "Work Experiences, Job Involvement, and Quality of Work Life among Information Systems Personnel," *MIS Quarterly* (18:2), pp. 175.
- Jackson, S., Turner, J., and Brief, A. 1987. "Correlates of Burnout among Public Service Lawyers," *Journal of Occupational Behaviour* (8:4), pp. 339-349.
- Jarvis, C.B., MacKenzie, S.B., and Podsakoff, P.M. 2003. "A Critical Review of Construct Indicators and Measurement Model Misspecification in Marketing and Consumer Research," *Journal of Consumer Research* (30:2), pp. 199-218.
- Joseph, D., Ng, K., Koh, C., and Ang, S. 2007. "Turnover of Information Technology Professionals: A Narrative Review, Meta-Analytic Structural Equation Modeling, and Model Development," *MIS Quarterly* (31:3), pp. 547-577.

- Kim, J. and Wiggins, M. E. 2011. "Family-Friendly Human Resource Policy: Is it Still Working in the Public Sector?" *Public Administration Review* (71), pp. 728-739.
- Kim, S. 2005. "Factors Affecting State Government Information Technology Employee Turnover Intentions," *American Review of Public Administration* (35:2), pp. 137-156.
- Kirmeyer, S., and Dougherty, T. 1988. "Work Load, Tension, and Coping: Moderating Effects of Supervisor Support," *Personnel Psychology* (41:1), pp. 125-139.
- Knoke, D. 1994. "Cui Bono? Employee Benefit Packages," *The American Behavioral Scientist* (37:7), pp. 963-978.
- Ko, J., and Hur, S. 2014. "The Impacts of Employee Benefits, Procedural Justice, and Managerial Trustworthiness on Work Attitudes: Integrated Understanding Based on Social Exchange Theory," *Public Administration Review* (74:2), pp. 176-187.
- Lee, S. Y., and Hong, J. H. 2011. "Does Family-Friendly Policy Matter? Testing Its Impact on Turnover and Performance," *Public Administration Review* (71:6), pp. 870-879.
- Luthans, K. 2000. "Recognition: A Powerful, but often Overlooked, Leadership Tool to Improve Employee Performance," *The Journal of Leadership Studies* (7:1), pp. 31-37.
- Maslach, C., and Jackson, S. E. 1981. "The Measurement of Experienced Burnout," *Journal of Occupational Behaviour* (2:2), pp. 99-113.
- Maslach, C., Schaufeli, W., and Leiter, M. 2001. "Job Burnout," *Annual Review of Psychology* (52:1), 397-422.
- Moore, J. 2000. "One Road to Turnover: An Examination of Work Exhaustion in Technology Professionals," *MIS Quarterly* (24:1), pp. 141-168.
- Newman, M., and Mathews, K. 1999. "Federal Family-Friendly Workplace Policies: Barriers to Effective Implementation" *Review of Public Personnel Administration* (19:3), pp. 34-48.
- Petter, S., Straub, D., and Rai, A. 2007. "Specifying Formative Constructs in Information Systems Research," *MIS Quarterly* (31:4), pp. 623-656.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., and Podsakoff, N. P. 2003. "Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies," *Journal of Applied Psychology* (88), pp. 879-903.
- Raghuram, S., and Wiesenfeld, B. 2004. "Work-nonwork Conflict and Job Stress among Virtual Workers," *Human Resource Management* (43:2-3), pp. 259-277.
- Ringle, C. M., Wende, S., and Becker, J. M. 2014. SmartPLS 3. Hamburg: SmartPLS. Retrieved from <http://www.smartpls.com>.
- Takase, M., Teraoka, S., and Kousuke, Y. 2015. "Investigating the Adequacy of the Competence-turnover Intention Model: How does Nursing Competence Affect Nurses' Turnover Intention?" *Journal of Clinical Nursing* (24:5-6), pp. 805-816.
- Thatcher, J., Stepina, L., Boyle, R. 2002. "Turnover of Information Technology Workers: Examining Empirically the Influence of Attitudes, Job Characteristics, and External Markets," *Journal of Management Information Systems* (19:3), pp. 231-261.
- Thompson, C. A. and Prottas, D. J. 2006. "Relationships Among Organizational Family Support, Job Autonomy, Perceived Control, And Employee Well-Being," *Journal of Occupational Health Psychology* (11), pp. 100-118.
- U.S. Bureau of Labor Statistics Division of Information Services, *Glossary*. Retrieved on 04/30/2015 from <http://www.bls.gov/bls/glossary.htm>.
- U.S. Bureau of Labor Statistics, *Employer Costs for Employee Compensation News Release*. Retrieved on 04/30/2015 from <http://www.bls.gov/news.release/pdf/ecec.pdf>.
- Vaast, E., and Levina, N. 2006. "Multiple Faces of Codification: Organizational Redesign in an IT Organization," *Organization Science* (17:2), pp. 190-201.
- Zaza, I., Armstrong, D. J., and Riemenschneider, C. K. 2015. "The Impact of Boundary Spanning on the Turnover Intention of US State Information Systems Employees," in *Proceedings of the 21st Americas Conference on Information Systems*, Puerto Rico.

Appendix. Construct Items

Construct	Var	Item	Source
Boundary Spanning	BSA1	My job requires me to assist other units in determining appropriate uses of IT.	Igbaria and Chidambaram 1997 (adapted from Baroudi 1985)
	BSA2	As part of my job I recommend new applications of IT to top management.	
	BSA3	As part of my job I inform other units in state government of new developments in IT.	
Work Exhaustion	WE1	I feel emotionally drained from my work.	Maslach and Jackson 1981
	WE2	I feel used up at the end of the work day.	
	WE3	I feel fatigued when I get up in the morning and have to face another day on the job.	
	WE4	I feel burned out from my work.	
	WE5	Working all day is really a strain for me.	
Perceived Workload	PWL1	I feel that the number of requests, problems, or complaints I deal with is more than I expected.	Kirmeyer and Dougherty 1988
	PWL2	I feel that the amount of work I do interferes with how well it is done.	
	PWL3	How frequently do you feel busy or rushed?*	
	PWL4	How frequently do you feel pressured?*	
Turnover Intention	TOI1	It is likely I will be working for the state this time next year.*	Moore 2000
	TOI2	It is likely I will take steps during the next year to secure a job at a different organization.	
	TOI3	I will be working with the state five years from now.*	
	TOI4	I will probably look for a job at a different organization in the next year.	
Less Traditional Employee Benefits	BEN1	Provide employees with the opportunity for flexible work schedules	Ko and Hur 2014
	BEN2	Allow employees to telecommute	
	BEN3	Formally recognize outstanding employee performance	Luthans 2000
	BEN4	Provide performance-based incentives**	
	BEN5	Have an active pay-for-performance system in place	

* Items dropped due to high cross loadings.

** Items dropped due to high collinearity.